GAMING DEVICE AND METHOD DISPLAYING SYMBOLS

IN A POLYGON ARRANGEMENT

5   Cross Reference to Related Application

This application is a utility conversion application of prior filed and

commonly owned provisional application Ser. No. 60/402,982 file August 12,

2002 and titled " Gaming Device and Method Displaying Symbols In A Polygon

Arrangement".

10   Field of the Invention

The present invention relates to electronic Poker games and devices

therefor.

                              Background

Video Poker is a well known game played using and electronic device such

15   as computer with a display, a hand-held device or with a dedicated, video Poker

gaming machine. In that the play of basic video Poker is the same whether it is

played with a hand held, electronic novelty device, with a computer, through the

Internet or with a dedicated gaming machine, the following description is

primarily directed to a dedicated, video Poker gaming or video lottery machine of

the type found in casinos.

To play the game according to the prior art, the player makes a wager by any suitable means such as by wagering credits, inserting tokens or the like. Once the wager is made the machine is prompted for play whereupon the processor for

5   machine randomly selects from data representing a deck of playing cards, data representing ten playing cards. This data need is not arranged in any order and typically is configured as a data string representing the cards of the deck in no particular order. From this randomly selected data, five playing cards are displayed in a straight row representing the initial holding and the data for the

10   remaining five cards is held in inventory. The player, using a touch screen on the game display or buttons on the machine or other input means such as a keyboard or mouse, selects which cards to discard, if any, from the initial holding. The data representing the discarded cards is replaced with the inventoried data and the replacement cards are displayed. The final hand is (with or without replacement

15   cards) is compared to a schedule of winning hands based on the ranking of hands of Poker. If the player has a winning final hand, they are paid based upon their wager. If they do not have a winning hand, their wager is lost. After determination of the outcome of the hand, the player makes another wager and plays the next hand according to the above.

It is further known to provide games according to the above based upon a Deuces Wild, Joker's wild and Joker's and Deuces wild format. It has also been known to display and play multiple hands such as described in Moody, U. S. Patent No. 5,823,873 titled "Method of Playing Electronic Video Poker Games".

There is a need for new and improved games for video Poker which have new and entertaining displays, which involves the play of multiple hands arranged new and entertaining patterns and wherein one or more cards can be shared by different Poker hands on the display.

Summary of the Invention

There is, therefore, set forth according to the present invention a device and method which presents the play of multiple hands of Poker inn a new and entertaining display-form which also provides for hands to share cards.

Accordingly an improved method and electronic gaming device of the type having a video display, a computer processor to control the device and display, a first data structure storing data representing each card of at least one deck of playing cards for the game and a wager acceptor is set forth which further includes that the processor is configured to randomly select from said data structure and display at least N five card hands at the display. Each hand is arranged on a side of a polygon having N sides, adjacent hands sharing at least one card at the corner

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intersection thereof. A second data structure stores data corresponding to hand winning outcomes and awards. This data may instead be stored in the first data structure. The processor is configured to compare each hand N to said data structure and, for each winning outcome, issue a corresponding award.

5   In one embodiment N = 3 whereby the polygon is a triangle. In another embodiment, the device further comprises a player input device configured for the player to select none, one or more cards of one or more hands N to discard and replace. The processor is further configured to select and display data representing a replacement card for each discarded card to define final hands and

10   compare each final N hands to said data structure and for each winning outcome issue a corresponding award.

As can be appreciated, the present invention provides for cards of hands to be shared and also for the player to discard and replace. This game presents the players with unique displays, e.g. hands arranged in a square or triangular pattern

15   as well.

Brief Description of the Drawing

FIG. 1 shows an example of a device for playing one illustrative embodiment of the game; and

FIG.2 shows another example of a device for playing another embodiment.

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Turning to the drawing there is shown a device 10 for playing an embodiment of the game according to the present invention. The device includes a housing 12 which contains a game processor 13 of known design as well as, if

5   desired a coin hopper and coin dispensing mechanism (not shown). The housing 12 also supports a game display 14 which is controlled by the game processor 13 as hereinafter described. Preferably the display 14 is a touch screen display so that the player may touch the screen to provide input to the processor 13. Disposed on the housing 12 may be a cash validator 16 or known construction and adapted to

10   read and validate cash inserted therein to accumulate gaming credits, which are shown at a credit meter 18. In lieu of cash or script, the device 10 may accept coins at a coin acceptor 20 to make wagers or accumulate game credits.

To input wagers to play a hand of play of the game according to the present invention, the player may depress a Bet Max button 22 which prompts the

15   processor 13 to debit the maximum amount permitted to be wagered, e.g. 15 credits for three hands, and accept that as the wager as well as prompt play of the hands of play as hereinafter described. Alternatively the player may wager any amount by repeatedly depressing a Bet One button 24 or by touching a Bet One icon 26 displayed on the touch screen display 14. A bet meter 28 registers the

amount being wagered by the player for a hand of play.

If the player has wagered the maximum amount permitted, e.g. 5
credits/coins/tokens per hand, play of a hand is automatically prompted by the
game processor. Otherwise, where the player has wagered less than the permitted
maximum, the player prompts play by depressing a deal/draw button 30 or
deal/draw icon 32 on the display 14.

When a wager has been made and play prompted. the processor 13
randomly selects cards for the hands of play from a first data structure 30 storing
data representing each card of a randomly shuffled standard deck of fifty-two
playing cards and controls the display 14 to display the hands in a polygon pattern
as shown in the drawing. It should be noted that where the desired display is a
triangle as shown, the processor 13 randomly selects nine cards for the polygon
arrangement of three game hands, i.e. Hand 1, Hand 2 and Hand 3. Each of the
game hands is disposed along a side of the polygon and at least two of the game
hands share a common card. Thus the display 12 may display the game hands as:

Hand 1   **K**   4   Hand 2

7   5

5   **Q**   5   Q

Hand 3

Viewing the polygon (triangle) counter-clockwise from the apex;

Hand 1	Q	K	7	5	Q (shown in bold)
Hand 2	7	5	Q	5	Q
Hand 3	5	Q	5	4	Q

As can be seen each hand on an adjacent side shares at least one card. Using the touch screen display 14, the player for each hand may selects cards to hold. For example the player may hold cards (shown as cards with the "H" notation) for each of the hands as follows:

Hand 1	Q	K	7	5	Q
	H			H	H
Hand 2	7	5	Q	5	Q
		H	H	H	H
Hand 3	5	Q	5	4	Q
	H	H	H		H

The player would then prompt the processor 13 to remove the discarded cards (those not held) and to display replacements therefor resulting in a display such as suggested below.

	Q			
Hand 1	**K**	5	Hand 2	
	Q		5	
5	**Q**	5	Q	
	Hand 3			

The hands, with replacements would then have the following final holdings:

Hand1   Q K Q 5 Q   (Three Queens)

Hand 2   Q 5 Q 5 Q   (Full House)

Hand 3   5 Q 5 5 Q   (Full House)

The processor 13 compares each hand to data representing a predetermined schedule of winning hands and corresponding pays based upon the tradition rankings of hands of Poker stored in a second data structure 32. If any hand has a winning outcome the player receives a pay based upon their wager. The pay schedule may differ but the following is an example of a pay tale based upon a five unit wager.

Royal Flush	4000
Straight Flush	250
Four of a Kind	125
Full House	45
Flush	30
Straight	25
Three of a Kind	15
Two Pair	10
Pair of Jacks or Better	5

After the processor 13 has determined and paid any winning hands, the player would have another opportunity to make a new wager to play another three hand set.

With reference to FIG. 2, another embodiment of the game is shown. Like components have like reference numerals.

Like the embodiment described above, upon prompting of play the processor 13 randomly selects and displays twelve cards representing three five-card hands arranged and displayed in a triangle form. Each of the hands shares two cards (the cards at the corners of the triangle) with the other two hands. Thus Hand 1 shares the corner cards with Hands 2 and 3 and so forth. Thus the sharing of the cards at the corners of the triangle polygon presents various strategy challenges to the player as described above.

It should be understood that while in the following example a polygon-form

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of a triangle was used, that the present invention is suitable for other polygon

forms such as squares (four sides) and other polygons. For example, a square

display of four hands may be as follows:

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                Q          Hand 1

        J    5    7    J    10

Hand 2  A              K

        2              4    Hand 3

    A   7   10   6     7

    Hand 4              9
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As shown each five card hand shares at least one common card with another hand.

Thus the player must exercise a degree of strategy in regards to holding any shared

cards. Further, if any shared cards are discarded, the replacement will be for the

two sharing hands.

Still further it should be understood that the game and device of the present

invention may be played in a "Deuces Wild", "Joker's Wild" (53 card deck),

"Deuces and Jokers Wild", Double Joker, One-eyed Jacks Wild format.

The arrangement of the hands in a polygon can also provide for bonuses

such as 6 or 7 card flushes or straight flushes in addition to the holding os the five

card hands. That is, the second data structure 32 may include 7-card winning

hands as well.

It should also be understood that the pattern of hands may be changed from that described above and may define hands of more or fewer than five cards, e.g. 7-card hands. The game could also be played in a Stud Poker format where the player is not permitted to replace cards. Also, each hand may be dealt from a separate deck which can result in holdings of five of a kind.

It should further be noted that certain hands may be played according different rules. For example, certain hands of the polygon may be played as draw Poker hands with others played as Stud Poker hands, Deuces Wild or Joker's Wild hands.

While I have shown and described certain embodiments of the present invention, it should be understood that the same is subject to modification without departing from the spirit and scope of the invention.